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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,682	12/04/2003	Hitoshi Mizutani	117970	5682
25944	7590	08/23/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER DUONG, THOI V	
			ART UNIT 2871	PAPER NUMBER

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,682

Applicant(s)

MIZUTANI ET AL.

Examiner

Thoi V. Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/04/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species III, claims 5 and 9-11, where claim 1 is generic in the reply filed on June 02, 2005 is acknowledged. The traversal is on the ground(s) that all species is sufficiently related that a thorough search for the subject matter of any one species would encompass a search for the subject matter of the remaining species. This is found persuasive.

Accordingly, claims 1-12 are pending in this application and all considered in this office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Akiyama (Pub. No. US 20005/0073627 A1).

Re claim 1, as shown in Figs. 5, 6 and 9, Akiyama discloses a spread illuminating apparatus for illuminating two objects, the apparatus comprising:

at least one light source 114;

a light conductive plate 112 having the at least one light source 114 provided at one end surface thereof and adapted to allow light emitted from the at least one light source and introduced therein to exit out therefrom through two major surfaces thereof respectively toward a first liquid crystal display element 101 (or 502) which constitutes one of two objects to be illuminated, and which is disposed over one of the two major surfaces of the light conductive plate, and toward a second liquid crystal element 102 which constitutes the other of the two objects to be illuminated, has a smaller display screen size than the first liquid crystal display element 101, and which is disposed over the other of the two major surfaces of the light conductive plate 112; and

a reflecting means (112b and 120) disposed at the other major surface of the light conductive plate having the second liquid crystal display element, the reflecting means being adapted to reflect light 401, 705 toward the first liquid crystal display element 502.

Re claim 2, the reflecting means 120 is a reflector plate (transflective reflector) provided to cover the areas not covered by the second liquid crystal display element 102 (page 6, paragraph 72),

wherein, re claim 6, the reflector plate has its reflectance matched with reflectance of the second liquid crystal display panel 102 (see lights 704 and 708 in Figs. 6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama (Pub. No. US 20005/0073627 A1) in view of Murakami et al. (Murakami (USPN 6,529,250 B1)).

Re claim 3, as shown in Fig. 6, instead of the reflector 120 and a polarizing means 104 provided at a surface of the second liquid crystal display element 102 facing the light conductive plate 112, Akiyama discloses the reflecting means as a reflective polarizer plate (page 7, paragraph 87),

wherein, re claim 4, the reflective polarizer plate has a same polarization plane as the polarizing means 104 provided at a surface of the second liquid crystal display element 102 facing the light conductive plate 112, the reflective polarizer plate substituting for the polarizing means 104 (page 7, paragraph 88).

Re claim 5, the reflecting means consists of a reflector plate 112b provided to cover the areas not covered by the second liquid crystal element 102 and a reflective polarizer plate 120 (page 7, paragraph 87),

wherein, re claim 10, the reflector plate 112b has its reflectance matched with reflectance of the second liquid crystal display panel (see light 704 in Fig. 6).

However, Akiyama does not disclose that the reflective polarizer plate reflects P-polarized light and transmits S-polarized light selectively as recited in claims 3 and 5.

As shown in Fig. 7, Murakari discloses a reflective polarizer plate having a polarization transmission axis and a reflection axis set such that S-polarized light beams are transmitted and P-polarized light beams are reflected, or vice versa (col. 4, lines 43-56, col. 13, lines 60-67 and col. 17, lines 27-33).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the spread illuminating apparatus of Akiyama by employing the reflective polarizer plate of Murakari so as to maintain excellent liquid crystal light valve characteristics and allow light from a light source to be used with high efficiency (col. 3, lines 5-14).

6. Claims 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama (Pub. No. US 20005/0073627 A1) in view of Murakami et al. (Murakami (USPN 6,529,250 B1) as applied to claims 3-5 and 10 above and further in view of Watanabe et al. (Watanabe, USPN 6,243,150 B1).

The spread illuminating apparatus of Akiyama as modified in view of Murakami above includes all that is recited in claims 7, 11 and 12 except for the reflecting means having its reflectance gradually varying at a given area close to the second liquid crystal display element.

As shown in Fig. 6, Watanabe discloses a reflection means 4h having its reflectance gradually varying at a given area close to the liquid crystal display element 2 (col. 8, lines 21-39 and col. 9, lines 11-17).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the spread illuminating apparatus of Akiyama with the teaching of Watanabe by forming a reflecting means having its reflectance gradually varying at a given area close to the second liquid crystal display element so as to effectively reflect light having low intensity and uniformly illuminate the liquid crystal element (col. 4, lines 1-7 and col. 9, lines 14-17).

7. Claims 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Akiyama (Pub. No. US 20005/0073627 A1) in view of Murakami et al. (Murakami (USPN 6,529,250 B1) and Saccomanno (USPN 6,443,585).

Re claim 8, the reflecting means is a reflective polarizer plate 120 (page 7, paragraph 87) which is provided entirely at the other major surface of the light conductive plate 112 having the second liquid crystal display element 102.

Re claim 9, the reflecting means consists of a reflector plate 112b provided so as to cover the areas not covered by the second liquid crystal display element, and a reflective polarizer plate 120 (page 7, paragraph 87), which is provided entirely at the other major surface of the light conductive plate 112 having the second liquid crystal display element 102.

However, Akiyama does not disclose that the reflective polarizer plate reflects P-polarized light and transmits S-polarized light selectively as recited in claims 3 and 5.

As shown in Fig. 7, Murakari discloses a reflective polarizer plate having a polarization transmission axis and a reflection axis set such that S-polarized light beams are transmitted and P-polarized light beams are reflected, or vice versa (col. 4, lines 43-56, col. 13, lines 60-67 and col. 17, lines 27-33).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the spread illuminating apparatus of Akiyama by employing the reflective polarizer plate of Murakari so as to maintain excellent liquid crystal light valve characteristics and allow light from a light source to be used with high efficiency (col. 3, lines 5-14).

Further, Akiyama does not disclose that the reflective polarizer plate is in direct contact with the other major surface of the light conductive plate having the second liquid crystal display element.

As shown in Fig. 1, Saccomanno discloses a reflective polarizer plate 8 provided in direct contact with a surface of a light conductive plate 7 (aperture 11) having a liquid crystal display element 16.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the spread illuminating apparatus of Akiyama with the teaching of Saccomanno by providing a reflective polarizer plate in direct contact with the other major surface of the light conductive plate having the second liquid crystal display element so as to uniformly transmit the light from an exit aperture of the light conductive plate (col. 2, lines 40-46).

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong

08/22/2005


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER